

**IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
WACO DIVISION**

WSOU INVESTMENTS, LLC d/b/a
BRAZOS LICENSING AND
DEVELOPMENT,

Plaintiff,

V.

DELL TECHNOLOGIES INC., DELL INC.,
EMC CORPORATION, and VMWARE,
INC.,

Defendant.

Case No. 6:20-cv-00486-ADA

JURY TRIAL DEMANDED

**PLAINTIFF'S OPPOSITION TO DEFENDANTS' RULE 12(c)
MOTION FOR JUDGMENT ON THE BASIS OF INELIGIBILITY
UNDER 35 U.S.C. § 101 OF U.S. PATENT NO. 7,092,360**

TABLE OF CONTENTS

	<u>Page</u>
TABLE OF AUTHORITIES	ii
I. INTRODUCTION	1
II. FACTUAL BACKGROUND.....	3
A. The '360 Patent Describes Technological Problems of Prior Art Scheduler Monitors.....	3
B. The 360 Patent Teaches Specific Technological Solutions to Problems Associated with Prior Art Monitors.....	4
III. LEGAL STANDARDS	9
IV. ARGUMENT.....	11
A. <i>ALICE</i> STEP 1: The Asserted Claims Are Not Directed to an Abstract Idea.....	11
1. The Patent Claims Provide Technical Solutions to Problems Associated with Prior Art Monitors for Schedulers.....	11
2. Dell's Characterizations of the '360 Patent Should Be Rejected	14
B. <i>ALICE</i> STEP 2: The '360 Patent Claims Have an Inventive Concept That Transforms Them Into a Patentable Invention.....	17
V. CONCLUSION.....	20

TABLE OF AUTHORITIES

	Page(s)
Cases	
<i>Amdocs (Isr.) Ltd. v. Openet Telecom, Inc.</i> , 841 F.3d 1288 (Fed. Cir. 2016).....	11, 12, 19
<i>Ancora Techs., Inc. v. HTC America, Inc.</i> , 908 F.3d 1343 (Fed. Cir. 2018).....	12
<i>BASCOM Global Internet Services, Inc. v. AT&T Mobility LLC</i> , 827 F.3d 1341 (Fed. Cir. 2016).....	11, 17, 18, 19
<i>Berkheimer v. HP Inc.</i> , 881 F.3d 1360 (Fed. Cir. 2018).....	10
<i>CosmoKey Sols. GmbH & Co. KG v. Duo Sec. LLC</i> , 15 F.4th 1091 (Fed. Cir. 2021)	17, 18, 19
<i>DDR Holdings, LLC v. Hotels.com, LP</i> , 773 F.3d 1245 (Fed. Cir. 2014).....	11
<i>Elec. Power Grp., LLC v. Alstom S.A.</i> 830 F.3d 1350 (Fed. Cir. 2016).....	16
<i>Enfish, LLC v. Microsoft Corp.</i> , 822 F.3d 1327 (Fed Cir. 2016).....	<i>passim</i>
<i>Finjan, Inc. v. Blue Coat Sys., Inc.</i> , 879 F.3d 1299 (Fed. Cir. Jan. 10, 2018)	12, 13, 14
<i>In re Gale</i> , 856 F. App'x 887 (Fed. Cir. 2021)	16
<i>Alice Corp. Pty. v. CLS Bank Int'l</i> , 134 S. Ct. 2347 (2014).....	<i>passim</i>
<i>Jim S. Adler, P.C. v. McNeil Consultants, L.L.C.</i> , 10 F.4th 422 (5th Cir. 2021)	9
<i>McRO, Inc. v. Bandai Namco Games Am. Inc.</i> , 837 F.3d 1299 (Fed. Cir. 2016).....	10, 18
<i>Microsoft Corp. v. i4i LP</i> , 564 U.S. 91 (2011).....	2

<i>In re Mobile Telecomm. Techs., LLC</i> , No. 16-cv-699-LPS-CJB, 2017 WL 1053099 (D. Del. Mar. 20, 2017).....	15
<i>Nexstep, Inc. v. Comcast Cable Commc’n., LLC</i> , No. CV 19-1031-RGA, 2021 WL 4943627 (D. Del. Sept. 17, 2021)	12
<i>Packet Intelligence LLC v. NetScout Systems, Inc.</i> , 965 F.3d 1299 (Fed. Cir. 2020), <i>cert. denied</i> , 141 S. Ct. 2521 (2021)	13, 14, 16
<i>Shopify Inc. v. Express Mobile, Inc.</i> , No. CV 19-439-RGA, 2021 WL 4288113 (D. Del. Sept. 21, 2021)	16
<i>SRI Int’l, Inc. v. Cisco Systems, Inc.</i> 930 F.3d 1295, 1301 (Fed. Cir. 2019).....	12, 17
<i>Slyce Acquisition Inc. v. Syte - Visual Conception Ltd.</i> , No. W-19-CV-00257-ADA, 2020 WL 278481 (W.D. Tex. Jan. 10, 2020)	10
<i>T-Rex Prop. AB v. Regal Entm’t Grp.</i> , No. 6:16-cv-927-RWS- KNM, 2017 WL 4229372 (E.D. Tex. Aug. 31, 2017)	17
<i>TecSec, Inc. v. Adobe Inc.</i> , 978 F.3d 1278 (Fed. Cir. 2020).....	15
<i>Terry Black’s Barbecue, L.L.C. v. State Auto. Mut. Ins. Co.</i> , 22 F.4th 450 (5th Cir. 2022)	9
<i>Verint Sys. Inc. v. Red Box Recorders Ltd.</i> , 226 F. Supp. 3d 190 (S.D.N.Y. 2016).....	16, 19
<i>Visual Memory LLC v. NVIDIA Corp.</i> , 867 F.3d 1253 (Fed. Cir. 2017).....	12, 13

Statutes

35 U.S.C. § 101	<i>passim</i>
35 U.S.C. §§ 102 and 103	2
35 U.S.C. § 112(d)	20

Other Authorities

Fed. R. Civ. P. 12(b)(6).....	9
Fed. R. Civ. P. Rule 12(c).....	1, 9

Plaintiff WSOU Investments, LLC d/b/a Brazos Licensing and Development (“Plaintiff” or “Brazos”) submits this brief in opposition to the Rule 12(c) motion for judgment on the pleadings (the “Motion”) filed by Defendants Dell Technologies Inc., Dell Inc., EMC Corporation, and VMWare, Inc. (collectively “Defendants” or “Dell”).¹

I. INTRODUCTION

Dell’s burden is a heavy one; it must show by clear and convincing evidence that Brazos’ patent claims are ineligible. Dell does not—because it cannot—do so. To the contrary, as shown below, the ’360 patent claims are clearly patentable under both governing Section 101 tests as set forth in *Alice Corp. Pty. v. CLS Bank Int’l*, 134 S. Ct. 2347 (2014) (“*Alice*”).

First, the ’360 patent claims are not abstract; they are directed to a new and inventive monitor and scheduler where the monitor detects the state of an element of the scheduler to compare it against a predetermine state of that element to determine whether the scheduler is functioning properly. The ’360 patent inventions solved technological shortcomings in the prior art – specifically, the time- and resource-intensive implementation of monitors required detailed knowledge about the precise timing of the entirety of scheduler’s internal operations and components through, for example, tracking of the scheduler’s cycles. By contrast, the ’360 patented monitors determine whether the scheduler is performing properly or within required parameters on a component/element basis. The ’360 patent monitors do so through, for example, the new structures (hardware and/or software) that detect the status of an element and compares it to the state that element should be in at a specific time. Just as in *Enfish, LLC v. Microsoft Corp.*,

¹ Submitted herewith and relied upon in opposition to Dell’s Motion is the Declaration of Jonathan K. Waldrop, dated April 20, 2022 (“Waldrop Declaration” or “Waldrop Decl.”). “Ex.” refers to exhibits attached to the Waldrop Declaration. “Mot.” refers to Dell’s Rule 12(c) Motion for Judgment on the Basis of Ineligibility Under 35 U.S.C. § 101 of U.S. Patent No. 7,092,360 (D.I. No. 172).

822 F.3d 1327, 1335 (Fed Cir. 2016), the claimed invention of the '360 patent improves existing technology by simplifying it, and speeds up the detection of problems with the scheduler or specific elements of the scheduler.

Second, assuming that the asserted claims fail under *Alice* Step 1 (and they do not), the claims nevertheless demonstrate an “inventive concept” under *Alice* Step 2. While Dell would have the Court hold that the mere fact that the claim limitations include “generic” or “black-box” components means that there cannot be any inventive concept, the claims, read in light of the specification, make clear that the claimed invention provides “something more” than prior art monitors did. In particular, the claimed inventions include new structures that detect the status of an element within a schedule and compare its status internally to determine whether the scheduler is functioning properly or within required parameters. Even if the structures themselves are not new (and they are), they are arranged in an unconventional manner to achieve a technologically superior result.

Thus, in light of the claim and the technological improvements described in the specification, at minimum, factual disputes remain concerning whether the '360 patent claims recite “conventional” and “well-known” components or functions and teach technological advancements over the prior art. Indeed, Dell’s assertions (particularly its attempt to engage in analysis more appropriate under 35 U.S.C. §§ 102 and 103) only support that there are factual disputes regarding whether the '360 patent represents a technological advance over prior art. In light of the presumption of validity and the “clear and convincing” standard applied to Section 101 challenges, *see Microsoft Corp. v. i4i LP*, 131 S.Ct. 2238, 2242 (2011), these disputes preclude dismissal prior to completion of discovery. Accordingly, Dell’s Motion is premature and should be denied.

II. FACTUAL BACKGROUND

A. The '360 Patent Describes Technological Problems of Prior Art Scheduler Monitors

In communications networks, data are transferred between various links in the network. Each link, or switching element, typically contains an interface with input ports for receiving the data, output ports for transmitting the data, and an input buffer for temporarily storing data. Ex. 1, 1:13-20. The input buffer may contain queues for storing different types of data or data from different sources. *Id.*, 1:19-26. A switching element also contains a controller that “control[s] the transfer of data cells” between the parts of the network. *Id.* The controller includes a scheduler – the scheduler is responsible “for determining the order of queues from which data cells are transferred to the output interface for transmission onto the network.” *Id.*, 1:26-29.

Being able to determine scheduler performance and accuracy is critical for network function. Prior art systems, however, relied on modeling the structure and functionality of the circuits for doing so. *Id.*, 1:56-2:8. When a simulated circuit is tested, a test signal may be input into the model. The response of the model to the test signal is then monitored. When simulating a packet scheduler circuit, test cells are supplied to the scheduler. The test cells that are output from the scheduler are then compared with the predicted output from the scheduler. *Id.*, 2:9-16. But in order to make this prediction, the monitor must know the timing of the test cells and the timing of internal the entirety of the operations that the scheduler performs, and/or must be “cycle accurate.” *Id.*, 2:17-24; 4:47-49. Thus, implementing a monitor for a simulated packet scheduler circuit is “difficult and time consuming” because it is necessary to have detailed knowledge about the internal functions and tasks of the scheduler. *Id.* Nor would that monitor be able to pinpoint the element within the scheduler that is causing the problem. As of the date of the '360 patent, there was no system for monitoring complex circuit structures that did not require detailed knowledge

of the internal scheduler tasks and time-consuming implementation.

B. The 360 Patent Teaches Specific Technological Solutions to Problems Associated with Prior Art Monitors

To address the above-described technological difficulties in the prior art scheduler monitoring systems, the inventors of the '360 patent created a monitor that did not require detailed timing knowledge or collection of all data packets to determine scheduler performance, but rather was simplified and allowed detection of problems with the scheduler (and the specific schedule element) more quickly. Specifically, the '360 patent teaches a monitor for monitoring the operation of an element (rather than the entirety of timing of all components of) scheduler for controlling the departure of data cells from a plurality of queues. *Id.*, 2:28-32. This monitor includes detection means for detecting the state of at least one element of the scheduler whose state relates to a decision of the scheduler to output a data cell from a queue. *Id.*, 2:32-34. Additionally, the monitor can detect “at least one of: one or more data cells transmitted to the scheduler, one or more data cells output from the scheduler, and the state of another element of the scheduler.” *Id.*, 2:34-38. The monitor also includes the module to compare the state of the scheduler element with an expected state for that element based on the other detected information, or for comparing the other detected information with expected information based on the state of the element. *Id.*, 2:37-43.

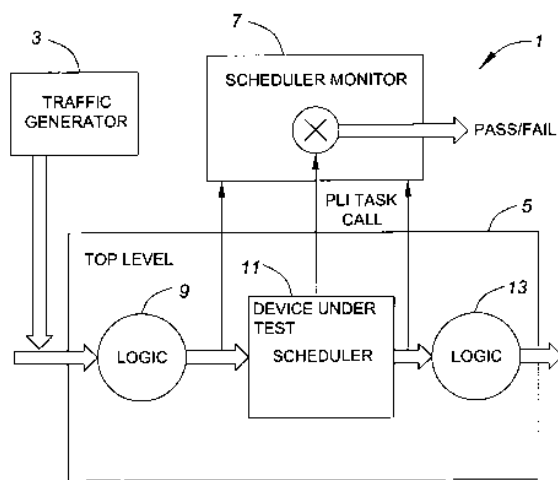


FIG. 1

The figures provided in the patent specification are instructive. Figure 1 of the '360 patent shows a schematic diagram of an apparatus and method for monitoring the performance of a packet scheduler. The monitoring system 1 shown in Figure 1 includes a traffic generator 3 for generating test cells, a device 5 for controlling the

throughput of test cells received from the traffic generator 3 and a monitor 7. The device 5 includes input logic 9, a scheduler 11 and output logic 13. *Id.*, 4:10-14. The input logic 9 receives test cells from the traffic generator and may be adapted to determine a particular queue of an input buffer in which the test cell should be placed and to pass each test cell into the appropriate queue. *Id.*, 4:15-19. The scheduler 11 is responsible for controlling the order in which cells are read out from the input buffer queues and for passing the selected cells to the output logic 13. The output logic 13 serves to package or format the data cells, to the appropriate transmission protocol. *Id.*, 4:19-25.

The monitor 7 is adapted to receive information relating to the status and operation of one or more elements within the scheduler which may contribute or respond to a decision of the scheduler to read a data cell from a particular input buffer queue at a particular time. Based on this information, the monitor determines the performance of the scheduler element(s). *Id.*, 4:26-32.

Figure 2 shows a detailed schematic of the system for monitoring and testing scheduler performance according to an embodiment of the claimed invention.

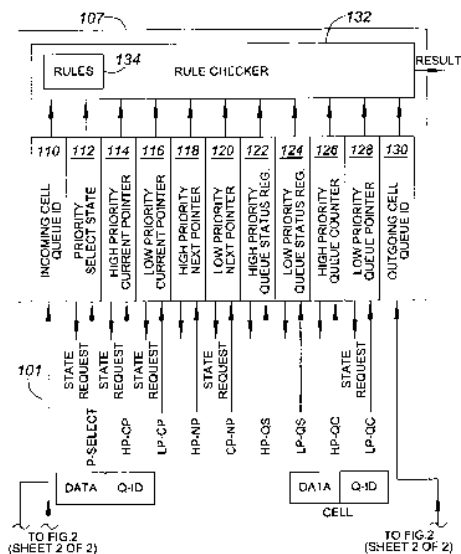


FIG. 2

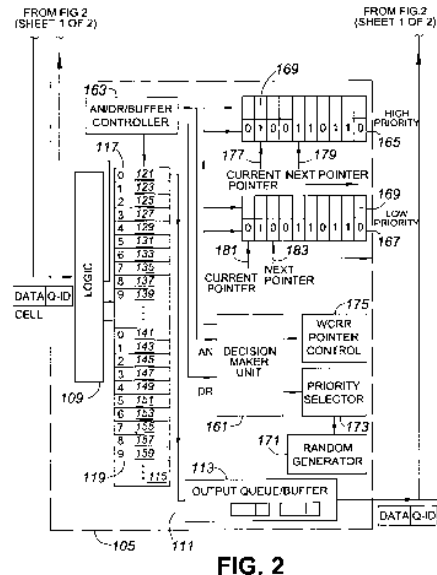


FIG. 2

The system 101 includes a device 105 for controlling the throughput of data cells, and a monitor 107 for monitoring the performance of the device 105. The device 105 includes an input

logic circuit 109 and a scheduler 111. The scheduler 111 comprises a cell storage device 115 having first and second storage sections 117, 119. Each section has buffers (121-159) for temporarily storing incoming data cells. *Id.*, 4:50-61.

The scheduler monitor 107 is arranged to receive information concerning the status and/or operation of certain elements of the scheduler 111 from which it may determine whether a particular element is functioning properly. *Id.*, 6:22-25. Monitor 107 may also be arranged to monitor the status of two scheduler elements where a particular status for one element can be predicted from the status of another element, or vice versa, if the elements are functioning correctly. *Id.*, 6:26-30. The monitor 107 includes a rule structure specifying one or more status of a first scheduler element and the expected status for another scheduler element, based on each status of the first element, if the scheduler is operating as intended. The monitor 107 further include a rule checker which checks the detected status of the elements with the status rules for the elements and either verifies that the status of the elements agrees with the rule or indicates that the detected status of the elements violates the rule. *Id.*, 6:34-44.

The scheduler monitor 107 may be adapted to receive information concerning the status of one or more scheduler elements over a period of time, for example, for a plurality of cell readout decisions, and may compare the status of a scheduler element at one time with the status of that scheduler element at another time and compare the detected status sequence with a sequence expected for that element if functioning properly. *Id.*, 6:45-52. The scheduler may provide a result of the comparison, e.g. an indication of whether the detected and expected status of the elements either match or do not match. *Id.*, 6:58-61.

More specifically, the embodiment of the scheduler monitor in Figure 2 includes modules 110, 112, 114 . . . to 130, which are adapted to receive information relating to the operation of the

scheduler under test, for example, the state of internal elements of the scheduler and parameters relating to the operation of the scheduler, for example, the identity of queues contained in incoming data cells to the input buffer and the identity of queues contained in outgoing cells output by the scheduler. *Id.*, 6:62-7:3. The monitor 107 further comprises a rule checker 132 which includes a set of rules 134 (which may have the form of a look-up table). *Id.*, 7:28-31. The rule checker 132 can receive information from one or more modules, for example, concerning the status of one or more elements of the scheduler and queue identifications contained within incoming and outgoing cells, and compares this information against specific rules contained in the set of rules 134. *Id.*, 7:31-37.

The patent specification explains that because of this particular arrangement of the monitor, where the monitor monitors at least one internal state of the scheduler, “detailed information concerning the internal timing of the scheduler is no longer required to implement the monitor, allowing the monitor to be considerably simplified” in comparison to a prior art monitor. *Id.*, 2:43-47. Additionally, the system for monitoring scheduler performance taught by the ’360 patent “allows problems with its operation or performance to be identified more rapidly than in prior art systems, which test scheduler performance based only on cell input and cell output.” *Id.*, 4:41-45. In other words, compared to prior art systems, where the monitor could only detect a cell entering and leaving the monitor and determine the performance of the scheduler based on the timing of the entirety of the scheduler and completion of cycles, the system of the ’360 patent allows the monitor to “look under the hood,” so to speak, to receive information about individual elements of the scheduler and detect any problems more quickly.

As the specification explains:

For each decision made by the scheduler [such as which data packet to transmit first], certain elements of the scheduler have a certain

state before a decision is executed, and change to another state after the decision is executed. For each scheduler state (i.e. either before or after a decision is made), the state of certain elements should relate to the state of other elements in a particular way, i.e. according to a particular relationship or one or more rules. . . . The monitor according to embodiments of the present invention checks that elements of the scheduler are functioning properly by, for example, checking or monitoring the status of two or more elements at a given time or changes in the status of the same element.

(*Id.*, 9:12-26. Thus, because of how the monitor is placed – collecting information about the operations within the scheduler, as opposed to only the scheduler’s input and output based on extensive knowledge of the timing and function of the entirety of components of the scheduler – the monitor can be simplified and still perform more quickly and efficiently than prior art systems. The monitor can also monitor the states of multiple elements, enabling it to perform a cross-check between elements, allowing faulty elements to be identified more readily. *Id.*, 10:11-19.

Further, the method for monitoring a scheduler as taught in the ’360 patent does not need to be “cycle accurate” in order to work, in contrast to prior art systems. *Id.*, 4:47-49; 11:61-67. Put differently, the monitor can function without extremely precise timing information regarding when each element of the scheduler performs an operation. Instead, the monitor can detect the order in which data cells are read from a queue in the input buffer.

These specific technological improvements are required by claim 1 and others:²

1. A monitor for monitoring the operation of a scheduler for controlling the departure of data cells, comprising detection means for detecting a state of an element of said scheduler, comparing means for comparing the detected state with a predetermined state for said element and for outputting the result of the comparison;

² Brazos originally asserted claims 1-17 and 21-49 against Dell. However, Brazos narrowed the asserted claims to 1, 2, 21, 22, 23, 26, 28, 29, 41, 43, and 44. Claim 2 is dependent on claim 1, claims 22-23 are dependent on claim 21. Claims 1 is similar to claim 26, except that claim 26 is directed to a method.

wherein said scheduler comprises a computer generated model, and said monitor includes means for requesting said scheduler model to pass the status of said element to said monitor; and

wherein said scheduler controls the departure of data from a plurality of queues, and said element comprises:

an element for recording whether a queue is empty or occupied, an element for recording the number of data cells contained in a queue, an element identifying a queue from which data is to be output, and an element identifying a group of queues from which data is to be output.³

The dependent claims provide additional structures and technological improvements. Thus, the '360 patent claims and specification recite specific technological improvements to monitors that detect and test the performance of schedulers for controlling the departure of data cells.⁴

III. LEGAL STANDARDS

Motion for Judgment on the Pleadings. Courts review a Federal Rule 12(c) motion for judgment on the pleadings under the same standards as a Federal Rule 12(b)(6) motion to dismiss for failure to state a claim. *Terry Black's Barbecue, L.L.C. v. State Auto. Mut. Ins. Co.*, 22 F.4th 450, 454 (5th Cir. 2022). When deciding Rule 12(b)(6) motions, courts “accept all well-pleaded facts as true and draw all reasonable inferences in favor of the nonmoving party.” *Jim S. Adler, P.C. v. McNeil Consultants, L.L.C.*, 10 F.4th 422, 426 (5th Cir. 2021). To survive a motion to dismiss, the complaint must contain sufficient factual matter, accepted as true, to state a claim to relief that is plausible on its face. *Id.* “Generally, overcoming the presumption of validity in a district court requires clear and convincing evidence.” *Slyce Acquisition Inc. v. Syte - Visual Conception Ltd.*, No. W-19-CV-00257-ADA, 2020 WL 278481, at *4 (W.D. Tex. Jan. 10, 2020)

³ The limitations in the second half of claim 1 (regarding the plurality of queues and the element for recording) were originally submitted as claim 2. Ex. 3. In an interview, the examiner requested that the applicant combine claims 1 and 2. *Id.* After the applicant did so, Ex. 4, the claims were allowed. Ex. 5.

⁴ The '360 patent provides additional examples of the claimed monitors at 9:57-10:32, 10:34-56, 10:58-11:12, 11:13-27, 11:29-48, 11:19-12:3, 12:4-10, 12:20-41, 12:42-52, and 12:52-60.

(Albright, J.) (denying motion for reconsideration of denial of Section 101 motion to dismiss , noting that the “clear and convincing” standard is a “high bar” and that “resolving § 101 eligibility of all asserted claims almost certainly requires fact discovery”).

Patentable Subject Matter Under 35 U.S.C. § 101. Patent eligibility under § 101 is a question of law, based on underlying facts. *See Berkheimer v. HP Inc.*, 881 F.3d 1360, 1368 (Fed. Cir. 2018). Courts analyze whether a patent is directed to an “abstract idea” under 35 U.S.C. § 101 under a two-step process (*Alice* Step 1 and *Alice* Step 2). *Alice*, 134 S. Ct. at 2355. Claims are presumed valid unless Defendant can prove by clear and convincing evidence that they fail both steps. In *Alice* Step 1, the inquiry focuses on the characterization of the claims—i.e., what the claims, considered as a whole and in light of the specification, are “directed to.” *Enfish*, 822 F.3d at 1335.

In asking this threshold question, courts focus on the specific claimed solution, rather than high-level simplification, because “[a]t some level, ‘all inventions ... embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas.’” *Alice*, 134 S. Ct. at 2354 (emphasis added). Indeed, the Federal Circuit has cautioned against oversimplification when attempting to articulate the abstract idea. *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1313 (Fed. Cir. 2016) (“[C]ourts ‘must be careful to avoid oversimplifying the claims’ by looking at them generally and failing to account for the specific requirements of the claims.”) And a patent’s description of technological shortcomings in the prior art supports the conclusion that the claims are directed to a specific, patent-eligible invention, rather than to an abstract idea. *Id.*

Under *Alice* Step 2, claims directed to abstract ideas under *Alice* Step 1 are still valid if they recite “an ‘inventive concept’ sufficient to ‘transform’ the claimed abstract idea into a patent-eligible application.” *Alice*, 134 S. Ct. at 2357. The focus of Step 2 of *Alice* is a search for

“something more,” something that ensures the claims are “more than a drafting effort designed to monopolize the abstract idea.” *Id.* at 2354–2357 (internal brackets omitted). For example, claims that specify *how* interactions between computers may be manipulated in a way that overrides routine, conventional computer activity recite an invention concept. *See DDR Holdings, LLC v. Hotels.com, LP*, 773 F.3d 1245, 1257 (Fed. Cir. 2014). The claims as a whole must be considered as an ordered combination rather than simply isolating elements or focusing on whether only certain elements recite a patentable invention. *See BASCOM Global Internet Services, Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1350 (Fed. Cir. 2016). “[A]n inventive concept can be found in the non-conventional and non-generic arrangement of known, conventional pieces.” *Id.* Additionally, an inventive concept may be evidenced by specific benefits that the invention provides not present in the prior art. *See, e.g., Amdocs*, 841 F.3d at 1302.

IV. **ARGUMENT**

A. ***ALICE* STEP 1: The Asserted Claims Are Not Directed to an Abstract Idea.**

1. **The Patent Claims Provide Technical Solutions to Problems Associated with Prior Art Monitors for Schedulers**

The '360 patent claims are directed to a new and inventive monitor and scheduler where the monitor detects the state of an element of the scheduler to compare it against a predetermined state of that element to determine whether the scheduler is functioning properly. *See, e.g., supra* at 4-9. These claims reflect a patent-eligible improvement to monitors and schedulers and thus, network functionality, such as more rapidly testing and identifying problems with network schedulers, without requiring detailed knowledge of the internal timing of elements of the scheduler, and is not an abstract idea. *See, e.g., Finjan, Inc. v. Blue Coat Sys., Inc.*, 879 F.3d 1299, 1305 (Fed. Cir. Jan. 10, 2018) (stating a method for virus scanning was directed to patent eligible subject matter under *Alice* Step 1 because they “employ[] a new kind of file that enables a computer

security system to do things it could not do before,” including “accumulat[ing] and utiliz[ing] newly available, behavior-based information about potential threats”); *Visual Memory LLC v. NVIDIA Corp.*, 867 F.3d 1253, 1259 (Fed. Cir. 2017) (“The patented system achieved greater accuracy than these prior art systems by measuring inertial changes of the tracked object relative to the moving platform’s reference frame.”).⁵

In *SRI Int’l, Inc. v. Cisco Systems, Inc.*, the Federal Circuit held claims drawn to a method of hierarchical computer network monitoring to be patent-eligible. 930 F.3d 1295, 1301 (Fed. Cir. 2019). The *SRI* claims recited a series of steps, including “deploying” network monitors, which detect “suspicious network activity based on analysis of network traffic data,” and generating and integrating “reports of ... suspicious activity.” *Id.* The Federal Circuit held that the claims were not directed to an abstract idea because they were “necessarily rooted in computer technology in order to solve a specific problem in the realm of computer networks.” *Id.* at 1303. The Federal Circuit recognized that the claims were not using a computer as a tool but, instead, recited a specific technique for improving computer network security. *Id.* In informing the court’s understanding of the technology and its relationship to the art, the court relied on statements in the specification that the claimed invention purported to solve weaknesses in the prior art by providing a framework for recognition of global threats to interdomain connectivity. *Id.* at 1303-04.

⁵ See also *Enfish*, 822 F.3d at 1336, 1339 (ruling that the “self-referential table recited in the claims . . . [was] a specific type of data structure designed to improve the way a computer stores and retrieves data in memory”); *Ancora Techs., Inc. v. HTC America, Inc.*, 908 F.3d 1343, 1347–49 (Fed. Cir. 2018) (finding claims were not ineligible because they require use of a modifiable portion of particular computer capacity to prevent running software on an unauthorized computer); *Amdocs (Isr.) Ltd. v. Openet Telecom, Inc.*, 841 F.3d 1288, 1302-03 (Fed. Cir. 2016) (finding patent-eligible claims that require that “network usage information is collected in real-time from a plurality of network devices at a plurality of layers and is filtered and aggregated before being completed into a plurality of data records”); *Nexstep, Inc. v. Comcast Cable Commc’n., LLC*, No. CV 19-1031-RGA, 2021 WL 4943627, at *2 (D. Del. Sept. 17, 2021).

And in *Packet Intelligence LLC v. NetScout Systems, Inc.*, 965 F.3d 1299, 1309 (Fed. Cir. 2020), *cert. denied*, 141 S. Ct. 2521 (2021), the Federal Circuit considered an invention that monitored data flows through a network to determine which packets were associated with which “conversation flow,” and to thereby determine the amount or type of information being transmitted by a particular application or protocol. *Id.* at 1307. Packet Intelligence argued, and the Federal Circuit agreed, that the claims were directed to a technical problem and provided a solution that could associate data with specific applications or protocols, functionality that was lacking in prior art systems. *Id.* at 1308. Importantly, a critical step in making this association was comparison of packet information with a database entry: “The claimed “parser subsystem” extracts information from the packet. ***This packet information is checked against ‘flow-entry memory’ by the claimed ‘lookup engine.’*** The flow insertion engine coupled to the memory and the lookup engine ***determines whether the packet matches an entry in the flow-entry database.***” *Id.* at 1309 (emphasis added).

The ’360 patent claims are similar to and even go beyond the claims in *Finjan*, *SRI*, and *Enfish*, and are closely equivalent to those in *Packet Intelligence*, by teaching a very specific solution to the technical problems faced by prior art monitoring systems. More specifically, the ’360 patent claims teach new structures for monitoring an element of a scheduler to determine the performance of, or issues with, the scheduler, rather than the entirety of the scheduler’s timing and cycle accuracy relating to the same, which result in improvements to monitoring technology.⁶ See *supra* at 4-9. This shift in the focus of what is being monitored in a network including a scheduler is novel – the ’360 patent teaches a new, specific technique to better monitor the flow of data across a network, allowing the identification of problems more quickly and with greater accuracy,

⁶ This new orientation of the monitor toward the internal elements of the scheduler was key in the allowance of the ’360 patent. .

even as the monitor itself is simplified and no longer required to be “cycle accurate.” (4:45-49; 11:61-63.) *See supra* at 8. These are exactly the kinds of improvements that meet the requirements of *Alice* Step 1. *Enfish*, 822 F.3d at 1337 (“[O]ur conclusion that the claims are directed to an improvement of an existing technology is bolstered by the specification's teachings that the claimed invention achieves other benefits over conventional databases, such as increased flexibility, faster search times, and smaller memory requirements.”).

This improvement is analogous to those techniques or new data structure that were previously found to be non-abstract in *Finjan*, *SRI*, *Enfish*, and *Packet Intelligence*, among others. Indeed, just as in *Finjan* and *Packet Intelligence*, the invention of the '360 patent allows the monitor to identify something it could not previously identify (problems with specific elements within a scheduler) and to use this information to improve the functionality of the network, including by comparing the information about an element with an expected state of the element or with the states of other elements within the scheduler. *See Packet Intel.*, 965 F.3d at 1309 (comparing collected information with database entry); *Finjan*, 879 F.3d at 1305 (the fact that the security provide identifies certain code allows the system to use new information to protect against threats). *See supra* at 4-8.

2. Dell's Characterizations of the '360 Patent Should Be Rejected

As an initial matter, Dell attempts to argue that simply because Brazos proposed that the Court should apply the plain and ordinary meanings of the terms in the '360 patent claims, those claims “involve only generic or black-box components performing routine function of data processing, require no specific technological improvements, and lack any inventive concept.” (Mot. at 8.) Essentially, Dell asks this Court to hold that claims with language that is clear on its face are somehow inherently not patent eligible under Section 101. Dell tellingly, and unsurprisingly, cites not a single case or other authority for this radical proposition. Indeed,

according to Dell’s argument, a patent applicant who drafts clear and understandable claims that do not require significant claim construction by courts should be penalized because their claims could not possibly cover a patent-eligible invention. This is nonsensical and contrary to case law. *See In re Mobile Telecomm. Techs., LLC*, No. 16-cv-699-LPS-CJB, 2017 WL 1053099, at *7 (D. Del. Mar. 20, 2017) (rejecting at the pleading stage the argument that claims were “conventional” or “routine” in favor of the specification’s teachings that they were directed to a particular “technical solution”). Nonetheless, Dell’s position is contrary to its own claim construction arguments and the Court’s agreement with Dell that claimed monitors use the new structures disclosed in patent specification. (D.I. 94 (Claim Construction Order) at 19-21; D.I. 82 at 8-15.) For example, the Court ruled that 360 patent discloses new structures for “detecting means . . .” and “comparing means.” *Id.*

Each of Dell’s additional contentions that the ’360 patent claims are directed to an abstract idea should be rejected. *First*, Dell contends that the ’360 patent claims are directed to the abstract idea of “comparing a detected state with an expected state for monitoring purposes.” *See* Mot. at 9-10. But that proposed abstract idea is an oversimplification, which does not account for the limitations that require the monitor to not simply look at input and output from the scheduler, but at elements specific to queues for data cells within the scheduler – limitations that are directly connected to the improvements of the ’360 patent claims over the prior art. *See supra* at 8-9; *see, e.g., TecSec, Inc. v. Adobe Inc.*, 978 F.3d 1278, 1293 (Fed. Cir. 2020) (“And we have reiterated the Supreme Court’s caution against ‘overgeneralizing claims’ in the § 101 analysis, explaining that characterizing the claims at ‘a high level of abstraction’ that is ‘untethered from the language of the claims all but ensures that the exceptions to § 101 swallow the rule.’”) (citations omitted); *Shopify Inc. v. Express Mobile, Inc.*, No. CV 19-439-RGA, 2021 WL 4288113, at *22 (D. Del.

Sept. 21, 2021) (same). It also does not account for the additional limitations of the scheduler that were added to the claims. *See supra* at n3. This oversimplification should be rejected just as a similar oversimplification was rejected in *Packet Intelligence*.

Second, Dell suggests that patents directed to monitoring a system for deviations from a particular state are automatically abstract as a matter of law, regardless of case law to the contrary.⁷ Mot. at 10-12. This is simply not the case. For example, as discussed above, the invention in *Packet Intelligence* was a method for monitoring packets exchanged over a computer network (and comparing packet information against a database). *Packet Intel.*, 965 F.3d at 1303. The court specifically held that the claimed invention satisfied *Alice* Step 1, rejecting the defendant's argument that the claims were directed only to "the abstract idea of collecting, comparing, and classifying packet information." *Id.* at 1308; *see also Verint Sys. Inc. v. Red Box Records Ltd.*, 226 F. Supp. 3d 190, 203 (S.D.N.Y. 2016) (patent directed to monitoring workstation displays that included a method "to compare two sequential display screens and determine the differences, copy a changed region, and transport that copy to a remote location for review on the screen of a monitoring workstation" that overcame deficiencies in prior art was not ineligible under Step 1).

Third, Dell contends that that '360 patent claims do not require "specific technological

⁷ The cases that Dell primarily relies upon are distinguishable. The claimed invention in *In re Gale* did not provide any technological improvement – the patentee's argument was that his claims focused on a narrow portion of metadata, not that his invention functioned in a better way than prior art inventions. *In re Gale*, 856 F. App'x 887, 888–89 (Fed. Cir. 2021) (noting that "Mr. Gale argues that his claims focus on a narrow, enumerated portion of the metadata associated with timing"). In contrast, here, the specification identifies numerous ways in which the claimed invention represents a technological improvement over the prior art. And in *Electric Power Group, LLC v. Alstom S.A.*, 830 F.3d 1350 (Fed. Cir. 2016), the court expressly noted that the claims were not directed to "an improvement in computers as tools, but on certain independently abstract ideas that use computers as tools," whereas here, the change in the focus of the monitor from merely input and output of the scheduler to specific elements within the scheduler represents a "computer-functionality improvement[]." The remaining cases cited by Dell (Mot. at 10-11) are similarly distinguishable and lacked an improvement to computer function.

improvements” related to monitoring schedulers and that the claims “involve purely functional claim language.” Mot. at 12-15. This is wrong in light of the specification and the claims themselves, which establish that the claims represent clear improvements over prior art monitors. *See supra* at 4-8. Further, in making this argument, Dell improperly downplays the novelty of the claimed invention by comparing it to the human mind. Mot. at 14. But as in *SRI*, the claims of the ’360 patent are not directed to an abstract idea that the human mind can perform – they are specifically directed to “using network monitors and analyzing network packets.” *SRI Int’l*, 930 F.3d at 1304 (“Indeed, we tend to agree with SRI that the human mind is not equipped to detect suspicious activity by using network monitors and analyzing network packets as [claimed].”).

B. *ALICE* STEP 2: The ’360 Patent Claims Have an Inventive Concept That Transforms Them Into a Patentable Invention.

Under *Alice* Step 2, a claim that is found to be ineligible under Step 1 may nevertheless be patentable if it contains unconventional steps that “transform” the invention “into a patent eligible application.” *BASCOM*, 827 F.3d at 1347; *CosmoKey Sols. GmbH & Co. KG v. Duo Sec. LLC*, 15 F.4th 1091 (Fed. Cir. 2021). “[A] claim directed to an ineligible concept may become patent-eligible when it includes unconventional steps that ‘confine[] the claims to a particular application of the principle.’” *T-Rex Prop. AB v. Regal Entm’t Grp.*, No. 6:16-cv-927-RWS- KNM, 2017 WL 4229372, at *10 (E.D. Tex. Aug. 31, 2017) (citations omitted); *see also BASCOM*, 827 F.3d at 1348 (“some inventions’ basic thrust might more easily be understood as directed to an abstract idea, but under step two of the *Alice* analysis, it might become clear that the specific improvements in the recited computer technology go beyond ‘well-understood, routine, conventional activit[ies]’ and render the invention patent-eligible.”).

For example, the patent in *CosmoKey* disclosed a method for authenticating the identity of a user performing a transaction at a computer, including activating the authentication function on

the user's mobile phone. *Id.* at 1093. The Federal Circuit found that the patent specification recognized that “when a user communicates with a remote transaction partner (e.g., a bank, a store, or a secure database) via a communication channel like the Internet, ‘it is important to assure that an individual that identifies itself as an authorized user is actually the person it alleges to be.’” *Id.* The Federal Circuit found that the focus of the claimed invention is the “activation of the authentication function, communication of the activation within a predetermined time, and automatic deactivation of the authentication function.” *Id.* at 1097. The Federal Circuit concluded that the patent specification describes the particular authentication technique as a technical improvement over the conventional prior-art authentication methods that prevents unauthorized access by third parties, and therefore is an inventive concept. *Id.* at 1099. The court also held that “claims and specification recite a specific improvement to authentication that increases security, prevents unauthorized access by a third party, is easily implemented, and can advantageously be carried out with mobile devices of low complexity.” *Id.* at 1098.

So too, the '360 patent claims cover specific techniques for monitoring data packet schedulers and have detailed limitations that make clear that the patent only claims a particular application of an abstract idea. *See supra* at 4-8, n.3. The specification instead makes clear that the patent is focused on a specific application of the general concept of monitoring a scheduler and that this specific application provides clear benefits over the prior art. *Id.*; *McRO, Inc.*, 837 F.3d at 1316 (“By incorporating the specific features of the rules as claim limitations, claim 1 is limited to a specific process for automatically animating characters using particular information and techniques and does not preempt approaches that use rules of a different structure or different techniques.”). And, as in *CosmoKey*, the monitor claimed in the '360 patent is more easily implemented than other prior art monitors and improves the actual functionality of the network by

improving identification of problems with the scheduler, or specific elements of the scheduler. And as in *Bascom*, even if the components (such as “monitors,” “schedulers,” and “elements”) were known, the particular arrangement of these components was non-conventional and resulted in a technical improvement for monitoring scheduler performance. *See supra* at 4-8.

Dell contends that the ’360 patent claims do not teach an inventive concept because they recite only “standard,” “conventional” or “well known” components and techniques.⁸ Mot. at 15-17. However, the fact that claims recite some generic components or functions does not render the claims ineligible. *See Enfish*, 822 F.3d at 1336 (finding software-based claims containing “data storage,” “memory,” and “data” valid under *Alice*); *see also Amdocs*, 841 F.3d at 1300 (explaining that a “solution [that] requires arguably generic components” is still patent eligible when “these generic components operate in a nonconventional manner to achieve an improvement in computer functionality” that is “a critical advancement over the prior art”); *BASCOM*, 827 F.3d at 1350 (“The inventive concept inquiry requires more than recognizing that each claim element, by itself, was known in the art.”).

Indeed, Dell’s repeated assertion that the claims merely recite the use of generic “black-box” structures is an oversimplification of the claims, which courts have regularly warned against. *See, e.g., Verint Sys. Inc. v. Red Box Recorders Ltd.*, 226 F. Supp. 3d 190, 192-93 (S.D.N.Y. 2016) (“Many recent motions seeking determinations of patent ineligibility suffer from such reductionist simplicity – from characterizing as simply a mousetrap that which is in fact a better mousetrap.”). Dell’s analysis is insufficient and fails to account for novel limitations, including the limitation that directs the monitor to an element of the scheduler, rather than knowledge of entirety of timing

⁸ In an attempt to support this misreading of the ’360 patent, Dell points to the prior art referenced in the specification. Mot. at 16-17. But Dell entirely ignores statements in the specification the explain how the claimed invention is an improvement over the prior art.

and cycles, as in the prior art. *See supra* at 8. Thus, the '360 patent claims teach an inventive concept more than sufficient to pass *Alice* Step 2.

Further, Dell's attacks on specific claims fail. With respect to claim 26, Dell simply asserts that it must lack an inventive concept because it supposedly "recites no components at all." Mot. at 17. It is true that claim 26 claims a method, but that method nevertheless includes necessary components, including a scheduler that controls the departure of data from queues and an element related to the statues of a queue. Ex. 1, 16:8-22. Claim 26, like claim 1, includes limitations that direct the monitor to look to elements within the scheduler, which, in and of itself, constitutes an inventive concept and a technological improvement over the prior art. Dell's primary complaint with claims 28 and 29 appears to be that they use the term "parameter" rather than "element," terms which Dell argues are treated "materially the same" in the specification – an argument which has nothing to do with whether the claims provide an inventive concept. Mot. at 17. And even assuming this were true, Dell should challenge these claims under 35 U.S.C. § 112(d), not under Section 101. The remaining claims Dell highlights in its brief all depend on claim 26 (or claim 29, which is dependent on claim 26), and all consequently also contain the same inventive concept as claim 26. Accordingly, all these claims must be found patent-eligible.

V. CONCLUSION

Brazos respectfully requests that this Court deny Dell's Motion, or, alternatively, defer its ruling until after discovery.

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RESPECTFULLY SUBMITTED,

By: /s/ Jonathan K. Waldrop
Jonathan K. Waldrop (CA Bar No. 297903)
(Admitted in this District)
jwaldrop@kasowitz.com
Darcy L. Jones (CA Bar No. 309474)
(Admitted in this District)
djones@kasowitz.com
Marcus A. Barber (CA Bar No. 307361)
(Admitted in this District)
mbarber@kasowitz.com
Heather S. Kim (CA Bar No. 277686)
(Admitted in this District)
hkim@kasowitz.com
John W. Downing (CA Bar No. 252850)
(Admitted in this District)
jdowning@kasowitz.com
ThucMinh Nguyen (CA Bar No. 304382)
(Admitted in this District)
tnguyen@kasowitz.com
Chen Jia (CA Bar No. 281470)
(Admitted *pro hac vice*)
cjia@kasowitz.com
KASOWITZ BENSON TORRES LLP
333 Twin Dolphin Drive, Suite 200
Redwood Shores, California 94065
Telephone: (650) 453-5170
Facsimile: (650) 453-5171

Paul G. Williams (GA Bar No. 764925)
(Admitted in this District)
pwilliams@kasowitz.com
KASOWITZ BENSON TORRES LLP
1230 Peachtree Street N.E., Suite 2445
Atlanta, Georgia 30309
Telephone: (404) 260-6080
Facsimile: (404) 260-6081

Joshua A. Whitehill (NY Bar No. 4766473)
(Admitted *pro hac vice*)
jwhitehill@kasowitz.com
Hershy Stern (NY Bar No. 4631024)
(Admitted *pro hac vice*)
hstern@kasowitz.com
Julianne Laporte (NY Bar No. 5547906)
(Admitted *pro hac vice*)
jlaporte@kasowitz.com

Howard L. Bressler (NY Bar No. 2487379)
(Admitted *pro hac vice*)
hbressler@kasowitz.com
Shelley Ivan (NY Bar No. 4338067)
(Admitted *pro hac vice*)
sivan@kasowitz.com
Noah P. Dorman (DC Bar No. 1779821)
(Admitted *pro hac vice*)
ndorman@kasowitz.com
KASOWITZ BENSON TORRES LLP
1633 Broadway
New York, NY 10019
Telephone: (212) 506-1700
Facsimile: (212) 506-1800

Mark D. Siegmund (TX Bar No. 24117055)
mark@swclaw.com
Craig D. Cherry (TX Bar No. 24012419)
craig@swclaw.com
Justin Allen (TX Bar No. 24081977)
justin@swclaw.com
**STECKLER WAYNE CHERRY & LOVE
PLLC**
8416 Old McGregor Road
Waco, TX 76712
Telephone: (254) 651-3690
Facsimile: (254) 651-3689

Gregory Phillip Love (TX Bar No. 24013060)
greg@swclaw.com
**STECKLER WAYNE CHERRY & LOVE
PLLC**
107 East Main Street
Henderson, TX 75652
Telephone: (903) 212-4444
Facsimile: (903) 392-2267

Attorneys for Plaintiff
WSOU INVESTMENTS, LLC d/b/a
BRAZOS LICENSING AND
DEVELOPMENT

CERTIFICATE OF SERVICE

A true and correct copy of the foregoing instrument was served or delivered electronically to all counsel of record, on this 20th day of April, 2022, via the Court's CM/ECF system.

/s/ Jonathan K. Waldrop
Jonathan K. Waldrop